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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/600,468	06/23/2003	Seung-Dcog An	1349.1227	7267
21171 7590 04/24/2007 STAAS & HALSEY LLP SUITE 700 1201 NEW YORK AVENUE, N.W. WASHINGTON, DC 20005			EXAMINER GRAINGER, QUANA MASHELL	
			ART UNIT 2852	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE 3 MONTHS		MAIL DATE 04/24/2007	DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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<b>Office Action Summary</b>	Application No. 10/600,468	Applicant(s) AN ET AL.	
	Examiner Quana M. Grainger	Art Unit 2852	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 29 January 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 3-9, 11-16 and 18 is/are pending in the application.  
     4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 3-9, 11-16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
     a) ☐ All    b) ☐ Some \*    c) ☐ None of:  
         1. ☐ Certified copies of the priority documents have been received.  
         2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
     Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
     Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement/s (IDS) submitted on 8-14-2006 was considered by the examiner.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 3-9, 11-16, and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirst (5,627,722). Hirst teaches a high developing voltage supply apparatus, comprising: a high developing voltage supply supplying a high developing voltage to developer roller shafts of fixed color development rollers to transfer toner to an organic photo conductor (OPC) drum from the fixed color development rollers; a high developing voltage driver selectively outputting a high voltage driving signal based on image to be printed to selectively apply the high developing voltage to one of the fixed color development rollers, with the high developing voltage comprising a DC voltage and an AC voltage superimposed; developer power switches switching the high developing voltage supplied to the fixed color development rollers in

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response to the high voltage driving signal output from the high voltage driver; and a DC voltage supply supplying a predetermined DC voltage to the other fixed color development rollers excluding the one of the fixed color development rollers supplied with the high developing voltage, wherein the DC voltage supply further comprises: the DC voltage supply providing the predetermined DC voltage; and resistors inter-connected between the DC voltage supply and the fixed color development rollers to supply the predetermined DC voltage output from the DC voltage supply to the other fixed color development rollers for developing operations of the image to be printed, as the high developing voltage applied is applied to the one of fixed color development rollers for the developing operations (figure 9-10, 13; column 5, line 55 – column 6, line 36). The DC voltage supply provides a negative voltage when the toner is an electrically negative toner and provides a positive voltage when the toner is an electrically positive toner.

Hirst teaches a high developing voltage supply apparatus, comprising: a high developing voltage supply supplying a high developing voltage to developing roll shafts of developers in order for toner to move from a plurality of fixed color development rollers to an OPC drum; a high developing voltage driver for selectively outputting a high voltage driving signal based on an image to be printed in order for the high developing voltage to be selectively applied to the fixed color development rollers; developer power switches switching the high developing voltage to the fixed color development rollers in response to the high voltage driving signal; and a voltage divider dividing and supplying the high developing voltage to the fixed color development rollers remaining except for the fixed color development roller supplied with

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the high developing voltage (figure 9-10, 13; column 5, line 55 – column 6, line 36). The high developing voltage comprises a DC voltage and an AC voltage superimposed.

4. Claims 3-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Suzuki (5,376,998). Suzuki teaches a high developing voltage supply apparatus, comprising: a high developing voltage supply supplying a high developing voltage to developer roller shafts of fixed color development rollers to transfer toner to an organic photo conductor (OPC) drum from the fixed color development rollers; a high developing voltage driver selectively outputting a high voltage driving signal based on image to be printed to selectively apply the high developing voltage to one of the fixed color development rollers, with the high developing voltage comprising a DC voltage and an AC voltage superimposed; developer power switches switching the high developing voltage supplied to the fixed color development rollers in response to the high voltage driving signal output from the high voltage driver; and a DC voltage supply supplying a predetermined DC voltage to the other fixed color development rollers excluding the one of the fixed color development rollers supplied with the high developing voltage, wherein the DC voltage supply further comprises: the DC voltage supply providing the predetermined DC voltage; and resistors inter-connected between the DC voltage supply and the fixed color development rollers to supply the predetermined DC voltage output from the DC voltage supply to the other fixed color development rollers for developing operations of the image to be printed, as the high developing voltage applied is applied to the one of fixed color development rollers for the developing operations. The DC voltage supply

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provides a negative voltage when the toner is an electrically negative toner and provides a positive voltage when the toner is an electrically positive toner.

Suzuki teaches a high developing voltage supply apparatus, comprising: a high developing voltage supply supplying a high developing voltage to developing roll shafts of developers in order for toner to move from a plurality of fixed color development rollers to an OPC drum; a high developing voltage driver for selectively outputting a high voltage driving signal based on an image to be printed in order for the high developing voltage to be selectively applied to the fixed color development rollers; developer power switches switching the high developing voltage to the fixed color development rollers in response to the high voltage driving signal; and a voltage divider dividing and supplying the high developing voltage to the fixed color development rollers remaining except for the fixed color development roller supplied with the high developing voltage. The high developing voltage comprises a DC voltage and an AC voltage superimposed.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

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the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

7. Claims 11-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki in view of Sato. Suzuki does not teach that the switches are solenoid switches. Sato teaches that solenoid switches use in conjunction with a multicolor development device is conventional.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use the teaching of Sato with the image forming device of Suzuki since the use of the solenoid switch is known in the art.

### ***Response to Arguments***

8. Applicant's arguments filed 1-29-2007 have been fully considered but they are not persuasive. Applicant argues that Suzuki fails to disclose at least the claimed inter-connected resistors of claims 3, 8, 14, and 18. However, Suzuki teaches in figures 5 and 6 inter-connected resistors.

Applicant argues that Suzuki fails to disclose at least the claimed self-bias operation, such as the self-bias operation of claim 5 "to self-bias the fixed color development rollers except the fixed color development roller supplied with the high development voltage," and as also set forth in claims 11-13 and 16. However, it is unclear how self-biasing is performed in the instant invention and further, the term self-biasing is not defined in the claims.

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Applicant argues that Suzuki fails to disclose any of the above inter-connection of the claimed resistors, the self-bias operation, and the use of the same voltage for the other fixed color development rollers as used for a selected development roller.

The claims remain rejected as discussed above.

***Contact Information***

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quana M. Grainger whose telephone number is 571-272-2135.

The examiner can normally be reached on 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Gray can be reached on 571-272-2119. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Quana M Grainger  
Primary Examiner



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